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# ✓ SAVE GRAIN BY *Cutting Pig Losses!* ✓

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## SAVE GRAIN BY CUTTING PIG LOSSES

**T**HE U. S. hog-growing industry is huge. Millions of hogs go to market each year. But it is shocking to learn that for every six going to market, four other pigs have died before getting that far. They die on the farm, at various ages, for one reason or another.

Forty percent of pigs failing to reach marketing age represent a three-way loss. Farmers lose in that countless hours of time and millions of dollars worth of feed and care bring only disappointment. Consumers lose in that large amounts of potential pork, hams, bacon, lard, and related products fail to appear on the market. The Nation loses in that every pig that dies before reaching market represents a substantial loss of precious livestock feed.

*Farm records kept carefully for 5 years indicate that around 14 percent of all hog feed is wasted because of pig deaths. You growers can take definite action to cut this loss. Every pound of feed saved will help you and help the Nation.*

There are three critical periods in the development of the hog: Before farrowing . . . the suckling period . . . the growing and finishing stage. Each is important. Each must be considered in cutting pig losses.

Here is a five-point program that will benefit every hog grower.

1. Have brood sows in condition.
2. Give pigs a chance through good facilities and good care.
3. Know your feeding.
4. Control parasites.
5. Control infectious diseases.

### HAVE BROOD SOWS IN CONDITION

As every farmer knows, crops require preparation of satisfactory seed beds. "Hog crops" are no different. In order to get good yields at farrowing time, sows must be in proper condition at breeding time and be kept in good condition throughout the 112 to 114 days until farrowing.

Heavy pig losses too often take place on the road to farrowing. "Unseen" losses are the reason. At breeding time, nature has given every normal sow a plentiful number of ova which are ready to be fertilized and develop into pigs. A recent study, however, showed that as many as 36 percent of ova commonly were lost at breeding time because they weren't fertilized. Nearly 20 percent more, it was found, even though fertilized, could be lost before farrowing.

Such losses result from many causes. Among them are poor condition of sows, poor breeding stock, improper feeding, parasites and disease, and even infertility of the boar. There is no single or sure-fire way to eliminate "unseen" losses. There is not yet enough scientific information on hand to bring about a maximum degree of breeding efficiency. *But—every hog grower can do his part, insofar as he is able. He can make sure that his breeding stock is in best possible condition, and that he follows good feeding and management practices.*

It is estimated that every pig farrowed dead costs the grower 140 pounds of wasted feed. The importance of prefarrowing care cannot be overemphasized.



## GIVE THE PIGS A CHANCE

A good farmer, of course, is on hand at farrowing time to help give the pigs a good start in life. Even with a good start, however, a pig has only a 60-percent chance of ever reaching market age. The first 8 or 10 weeks until weaning are the most critical, and the first few days are most critical of all. The pig can be crushed or crippled or eaten by the dam. It can become chilled if proper precautions are not taken. It can also die of a respiratory disease such as pneumonia, pleurisy, flu, etc. It can die of the other diseases that lie in wait, or of an accident.

*Any pig dying between farrowing and weaning represents an average loss of about 13¼ pounds of feed for each day it lived.*

Approximately half of young-pig losses are due to their mothers' lying on them. A guard rail around a farrowing pen is one good means of keeping sows from crushing their pigs. Every farrowing pen should have one. Guard rails should extend 8 to 10 inches from side-walls of the pen, and there should be 8 to 10 inches clearance above the floor.

Pig hovers, or pig brooders as they also are called, are another valuable addition. Pigs that can remain warm during their critical first weeks of life are healthier and gain faster. The Purdue University Agricultural Experiment Station found that 17 percent more pigs were saved in pens with heat than in other pens where there was none. The Agricultural Research Center at Beltsville, Md., used home-made electric pig hovers in making a similar study during spring farrowing several years ago. Even though the Center's hog barns were heated to remove the chill, the extra heat given young pigs by hovers in pens was very helpful. Nearly 5 percent more pigs were alive at the end of 3 weeks in pens with hovers than in pens without them. Not only was the heat valuable but also the light from the ordinary 150-watt bulbs in the hovers attracted the pigs and lessened the danger of their being crushed by the sow during their first week of life. Pigs having early use of electric hovers averaged 1.4 pounds heavier when 56 days old than those without them.

For best health of young pigs, farrowing houses should be between 50° and 60° F. Around 57° appears to be best. At 60° the sow begins to become warm and restless, while at 50° little pigs begin to chill. Early spring litters should be farrowed in houses with supplemental heat.

Sloping floors also help save new-born pigs. University of Kentucky work has shown that sloping floors cause the sow to lie with her head or back up the slope. The pigs gravitate to the lower end of the pen, with less danger of being crushed. On 49 Kentucky farms, records on 385 litters showed only 1 pig out of every 30

crushed on sloping floors. On the same farms, however, nearly 1 out of every 4 was crushed on customary level floors. The slope recommended is 1-foot drop for each 8 feet of farrowing-pen length.

## KNOW YOUR FEEDING

The larger the pig at birth, the greater its chance of reaching market weight. A sow that is well fed during her gestation period can be expected to deliver bigger and better pigs. This means that she must have rations which contain the required carbohydrates, proteins, minerals, and vitamins.

Proper feeding of the sow also means that she will do a better job of feeding her young. Tests at the Wisconsin Agricultural Experiment Station showed that brood sows fed only 5 percent of alfalfa in the gestation ration (made up largely of corn and soybean meal) did not produce enough milk to suckle their litters satisfactorily. On the other hand, those receiving 15-percent alfalfa raised twice as many pigs and the pigs were larger and more vigorous. (Rations containing 15-percent ground alfalfa hay also were favored for growing and fattening hogs.) Ample exercise for the sow during the gestation period also will pay good dividends.

Tests made at the Purdue station show that insufficient protein supplements can lead to heavy pig losses. When sows were fed only grain and mineral supplement, 44 percent of the pigs had died by the end of their first week. Among those having good protein supplements in addition, only 11 percent died during their first week.

Good care of sows so that they will secrete plenty of milk for their baby pigs is particularly important. This means having the sows come up to farrowing in good condition, and regulating their feed properly at farrowing time. It's a good idea to put a sow in her farrowing pen several days before farrowing so that she will become accustomed to her new surroundings before the pigs arrive. It has been found that many deaths of pigs less than 10 days old are due to faulty milk supply of their mothers—in other words, actual death by starvation.

Another common cause of pig losses is anemia, due to a deficiency of iron. Anemia is usually found where pigs don't have a chance to run on dirt. They need iron and it may be supplied by throwing fresh sod into the pen, or by turning the hogs on pasture, or by reinforcing clean soil with suitable metallic salts.

## CONTROL PARASITES

Most pigs have worms. In fact, the pig that is not infested with worms is more or less of a rarity. A majority of farmers are so accustomed to pigs having worms that they take very little notice of the infestations, nor do they fully realize how much each wormy pig's growth is retarded nor how much feed is wasted.



Such parasites can largely be prevented and controlled. The effort is well worth the time and relatively small expense. An actual experiment showed that young pigs living under constant exposure to a variety of internal parasites were gaining only 0.32 pound per day—while their litter mates, protected against parasites, were gaining an average of 1.17 pounds per day.

Another experiment, that showed how much feed can be wasted in this way, concentrated upon one kind of parasite—the large intestinal roundworm, or ascarid. It revealed that daily gains were inversely proportional to the number of worms in the pig—in other words, the more worms, the less the gain. A pig that harbored 109 roundworms failed to gain and, in fact, lost weight, and ultimately died. A pig that had 39 of these worms gained 0.39 pound per day. One that had 12 gained 0.72 pound per day. The pigs that had no worms remained in good health and grew more rapidly than did their infested mates, making gains of 0.75 to 0.86 pound per day.

Pigs farrowed and raised in the Coastal Plain section of Georgia, and having only moderate infestations of the various worms that infest pigs in that region, took 5 weeks longer to reach market weight than pigs having either no worms or only light infestations. Also, the infested pigs required an average of 0.8 pound of feed more per pound of weight gain than the wormless ones.

To get the most out of your pig crop, parasite control is necessary. Proper sanitation is the first step in such control. Treatment of pigs with worm-removing drugs, however, is a valuable practice. One of the most harmful parasites of pigs is the ascarid—one of the best drugs to use against it is sodium fluoride. Very good results have been obtained by feeding pigs for 1 day on a mixture of one part by weight of sodium fluoride (technical grade) to 99 parts by weight of dry ground feed, thoroughly mixed. If growing pigs appear to be infested with roundworms, they will be helped by giving them two treatments before they reach market weight and age. The first treatment can be when they are 2 or 3 months old; the second, when they are about 4 or 5 months old.

(Sodium fluoride is poisonous. The technical grade that is ordinarily available for general use is tinted to keep from confusing it with salt, sugar, flour, and other substances. Containers of sodium fluoride should be conspicuously labeled and stored out of reach of children, household pets, and persons not familiar with its poisonous nature.)

Good management systems that are effective in controlling some of the worm parasites of pigs have been developed. Important among them is the "McLean County system of swine sanitation" that was worked out in McLean County, Ill., and has attracted the favorable attention of hog growers in other regions also. Essen-

tially, the system is based on (1) cleaning farrowing pens thoroughly, (2) washing the sow before putting her in the clean quarters, (3) in a few days to 2 weeks after farrowing, giving sow and litter a "clean trip" to clean pasture, and (4) keeping pigs on uncontaminated pasture and away from old hog lots until they are at least 4 months old. Good management systems for the control of various worm parasites are described in the following publications: USDA Leaflet No. 5, The Prevention of Roundworms in Pigs; USDA Leaflet No. 8, Controlling Kidney Worms in Swine; USDA Leaflet No. 118, Controlling Lungworms of Swine; Farmers' Bulletin No. 1787, Internal Parasites of Swine; and USDA Yearbook, 1942, Keeping Livestock Healthy.

## CONTROL INFECTIOUS DISEASES

When disease shows up, the first important step is to get a definite diagnosis. Sometimes this is difficult. Frequently there is a similarity of symptoms, lesions, etc., in the different infectious, nutritional, and parasitic diseases that makes it hard to pin the trouble down. The job, therefore, properly belongs to the veterinarian. He should be consulted at the first appearance of disease.

Prevention through sanitation is highly effective in many diseases. Avoid putting new stock in with a herd of healthy pigs whenever possible. New animals should be kept by themselves and watched for any evidence of disease for at least a week, and preferably longer, before moving them in with a healthy herd.

Sick and healthy pigs should be separated from one another and moved to clean ground. The healthy pigs should be watched carefully and any that get sick should be removed. Such measures are helpful during outbreaks of many of the infectious diseases.

Another good measure is to treat the navel of each pig with tincture of iodine as soon after birth as possible. This will help prevent navel infection.

Three widespread diseases that often cause large losses of pigs are hog cholera, swine erysipelas, and brucellosis. Their causes are well known. Losses from them can be reduced greatly when prevention and control measures are properly used. Proper immunization is effective in preventing hog cholera and swine erysipelas. Consult your local veterinarian or State livestock sanitary officials in regard to the need and choice of methods for immunizing against them.

Based on present knowledge of brucellosis, two control methods are offered:

PLAN I. Dispose of the entire herd, clean and disinfect hog barns and premises, and replace with swine from uninfected herds. This plan is preferable in small herds and in commercial herds.

PLAN II. Separate weanlings negative to the blood test from the infected herd, keep them by themselves,

and dispose of the infected herd when marketable. This should be carried out under the supervision of a veterinarian.

Two other diseases that can kill many young pigs are transmissible gastroenteritis and swine dysentery. These two have been recognized more recently and are not generally so well understood. More needs to be known about them in order to get reliable prevention and control.

The limited knowledge on the control of transmissible gastroenteritis indicates that sows yet to farrow should be moved to individual farrowing houses, preferably

widely separated. Great care should be taken to keep from carrying the disease to these areas.

For the control of swine dysentery, general sanitary measures are the most effective, including the separation of sick and healthy pigs. As yet no medicinal preparation has shown sufficient merit to be recommended as a specific treatment.

Other infectious diseases that may be responsible for less significant losses of young pigs are swine pox, swine influenza, pseudorabies, and several bacterial infections of the respiratory and digestive systems.

